

ABSTRACT

A Li-ion polymer battery and methods for its fabrication. A first and second layer, of a polymer/particulate material composition, separate and bind each anode and cathode. The polymer of the first layer and its associated solvent differ from the polymer of the second layer and its associated solvent. Solubility requirements are such that the polymer of the first layer is non-soluble in the solvent of the second layer, and the polymer of the second layer is non-soluble in the solvent of the first layer. The polymers and particulate materials of the layers form a porous structure for containing the electrolyte of the battery so as to eliminate the need for a substantial case for enclosing the battery.